

VISHAL KHOSLA

1715 Dell Avenue, Campbell CA, Phone No. (510)-304-5793, vkhosla@cetr.com

Education

- MS, Material Science and Engineering, University of Florida (Aug'02- Dec'04)

Experience

: Worked at National Science Foundation center – PERC (Particle Engineering Research Center) at University of Florida Aug 02 – Dec 04

- Worked on STI and MEMS CMP.
- Worked on formulating Silica nanoparticles – porous particles, large particles for medical and CMP applications.

: Worked full time as a process engineer at ASM Nutool (May 2004-Dec 2005)

- Part of team responsible for initiating and developing Electro Chemical Mechanical Polishing (ECMP) process which involved design of electrolyte, design of backside cleaning chemistries, design and selection of pad, pad conditioner development, optimizing various process variables and inputs to engineering to come up with a production worthy hardware.
- Part of a team which successfully demonstrated direct plating and 3D plating of copper on Ruthenium and Tantalum.
- Responsible for initiating Pad conditioner work for Copper CMP and ECMP.
- Key technology engineer for Electrochemical mechanical Deposition (ECMD), Electrochemical Deposition (ECD), Chemical mechanical Polishing (CMP) and ECMP processes.
- Part of team responsible for directly supporting and dealing with customers on site at ST Crolles (France).

: Working full time as a Sr Application and Marketing Engineer at CETR (Dec 2005-)

- Closely involved with launching new tools - Post CMP cleaner, eCMP Polisher, portable Nanoindenter, Windmill tester, Biodiesel Tribometer , Bio Tribometer etc.
- Working on ASTM committee to develop standards for CMP consumables.
- Responsible for helping researchers in advance application development.
- Responsible for integrating new technologies to our platform.
- Responsible for developing company marketing strategies which also includes website, brochures, writing technical and white papers, blogs etc.
- Responsible for handling various trade shows/sales related activities across the globe.

Technical Publications

- Over 30 publications in various different areas including semiconductor, thin films, lubes, oil, coatings, bio materials etc.

Thin and Planar Copper Layers for Advanced Interconnect Fabrication I. Emesh, V. Khosla, S. Erdemli, R. Emami and B. Basol ASM NuTool Inc. 3501 W. Warren Avenue, Fremont, CA 94538 T. Mourier¹, K. Haxaire², M. Cordeau¹, J. Torres² 1 CEA-DRT-LETI – 17 rue des Martyrs 38054 Grenoble Cedex 9, France (Crolles 2 Alliance Assignées) 2 ST Microelectronics, 850 rue Jean Monnet, F38926 Crolles Cedex

Post Cmp Cleaning applications – Challenges and Opportunities R.K. Singh, D.W. Stockbower and C.R. Wargo Entegris, Inc. V. Khosla, M. Vinogradov and N.V. Gitis Center for Tribology, Inc. - March 2008 13th international Chemical mechanical planarization for ULSI Multilevel Interconnection Conference CMP MIC -

Bench top dual mode eCMP polisher with multi sensing metrology V. Khosla, M. Vinogradov CETR, 1715 Dell Ave, Campbell, CA 95008 - March 2008 13th international Chemical mechanical planarization for ULSI Multilevel Interconnection Conference CMP MIC

VISHAL KHOSLA

1715 Dell Avenue, Campbell CA, Phone No. (510)-304-5793, vkhosla@cetr.com

Comprehensive Nano-Mechanical and Tribological Characterization of Hair Dr Norm Gitis, Dr. Ilja Hermann, Dr. Suresh Kuiry, Vishal Khosla Center for Tribology, Inc. 1715 Dell Avenue, Campbell, CA 95008, - Proceedings of the STLE/ASME International Joint Tribology Conference October 22-24, 2007, San Diego, California, USA

Nano and Micro Indentation and Scratch tests of Mechanical properties of metals Dr. Norm Gitis, Dr. Ilja Hermann, Dr. Suresh Kuiry and Vishal Khosla Center for Tribology, Inc. Proceedings of the STLE/ASME International Joint Tribology Conference IJTC2007 October 22-24, 2007, San Diego, California, USA

Tribo- Mechanical Nano Characterization of thin films Dr Norm Gitis Michal vibogrodov , Vishal Khosla March 14-16 Vienna nano 2007

Polysaccharide Viscosupplements: A Comparison of Rheological and Tribological Properties Authors: Samuel Falcone*, Vishal Khosla**, Suresh Kuiry**, Norm Gitis**, and Richard Berg* *FzioMed, Inc., 231 Bonetti Drive, San Luis Obispo, CA 93401 ** Center For Tribology, Inc (CETR), Campbell, CA 95008

Standard tests of Pad Conditioners Vishal Khosla, Norm Gitis , Suresh Kuiry, Michael Vinogradov, Jun Xiao Center for Tribology, 1715 Dell Ave, Campbell, CA 95008, USA; www.cetr.com CAMP conference Aug 2006

Tribo-Mechanical Nano-Characterization of Thin Films Vishal Khosla, Norm Gitis , Suresh Kuiry, Michael Vinogradov 1715 Dell Ave, Campbell, CA 95008, USA; www.cetr.com CAMP conference Vienna Thin Film Conference Feb 2007

Tribology Tests of Skin Care Products in Flat-on-Flat Reciprocating Mode Dr. Suresh Kuiry, Dr. Norm Gitis and Vishal Khosla JIFT 2008

Wear Behavior and Debris Distribution of UHMWPE in Bi-directional Sliding, Norm Gitis¹, Vishal Khosla¹, Har Prashad¹, Ge Shirong² and Wang Shibo² PFAM XVII Vol II.

Non-destructive Evaluation of Elastic Modulus Distribution in Polymer Nano-Composites Norm Gitis¹, Vishal Khosla¹, Har Prashad¹, Ilja Hermann¹ PFAM XVII Vol II.

Nano and Micro Indentation and Scratch tests of Mechanical Properties of Thin films N. Gitis¹, I. Hermann¹, S. Kuiry

Post CMP Cleaning Applications V. Khosla, M. Vinogradov and N.V. Gitis Center for Tribology, Inc. R.K. Singh, D.W. Stockbower and C.R. Wargo Entegris, Inc. CAMP 2007

Advanced Instrumented Micro-hardness at Ultra-High Temperatures and Acoustic Emission to Detect Crack Initiation of Ceramic Coatings Norm Gitis, Alex Meyman, Vishal Khosla, Suresh Kuiry, MRS Dec 2008

Non destructive Stiffness Mapping of Composite, Topographically smooth and Structured materials Dr. Norm Gitis, Vishal Khosla, Dr. Ilja Hermann, Michael Vinogradov CETR, Inc IJTC 2008

Standardised Functional Tests of Pad Conditioners Vishal Khosla, Norm Gitis, Suresh Kuiry, Michael Vinogradov Center for Tribology, 1715 Dell Ave, Campbell, CA 95008, USA; 2006 11th international Chemical mechanical planarization for ULSI Multilevel Interconnection Conference CMP MIC

Evaluation of Durability and Tribological Properties of Electrical Carbon Brush by monitoring insitu Acoustic Emission, COF, Voltage and Temperature. N Gitis, M. Vinogradov and V. Khosla CETR STLE 2007

Non-Destructive Nano-Mechanical Reliability and Defectivity Characterization of Thin Films Gitis, N., Hermann, I., Khosla, V Micro Nano Reliability Issue 06 2007

Durability Tests of Total Artificial Joints in Bi-Directional Sliding N. V. Gitis¹, M. Vinogradov¹, V. Khosla¹, S. Ge², S. Wang² COST 533 Biotribology 69

Scanning Nano-Metrology of Ultra Thin Films V.Khosla, I.Hermann, N.Gitis, M.Vinogradov Nano Spain 2008

Effective Tribology Testing of Lubricating Oils on Flat and Curved Surface Dr. Norm Gitis, Michael Vinogradov, Vishal Khosla Center for Tribology, Inc, French Tribology Conference 2007

Advanced Mechanical Testing of Thin Films and Coatings Dr. Norm Gitis, Michael Vinogradov, Vishal Khosla Center for Tribology, Inc, French Tribology Conference 2007

Studies of Advanced Pad conditioners Dr. James Chien-Min Sung., Kinik Company, Taipei County, 239 Taiwan Dr. Norm Gitis and Vishal Khosla, Center for Tribology, Campbell, CA 95008, USA Eiichi Nishizawa and Toshio Toganoh, Tomei Diamond Co., Tochigi, 323-0807 Japan , 2006 11th international Chemical mechanical planarization for ULSI Multilevel Interconnection Conference CMP MIC